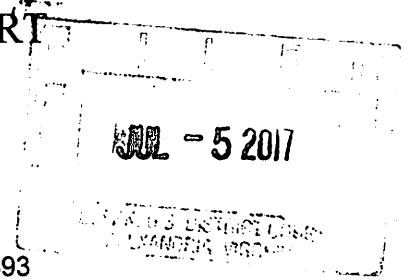


UNITED STATES DISTRICT COURT

for the
Eastern District of Virginia



In the Matter of the Search of
(Briefly describe the property to be searched
or identify the person by name and address)
A beige Chevrolet Malibu bearing Virginia License Plate
Number XXX-3020

Case No. 1:17sw393

APPLICATION FOR A SEARCH WARRANT

I, a federal law enforcement officer or an attorney for the government, request a search warrant and state under penalty of perjury that I have reason to believe that on the following person or property (identify the person or describe the property to be searched and give its location):
See Attachment A.

located in the Eastern District of Virginia, there is now concealed (identify the person or describe the property to be seized):
See Attachment B.

The basis for the search under Fed. R. Crim. P. 41(c) is (check one or more):

- ☒ evidence of a crime;
- ☒ contraband, fruits of crime, or other items illegally possessed;
- ☒ property designed for use, intended for use, or used in committing a crime;
- ☒ a person to be arrested or a person who is unlawfully restrained.

The search is related to a violation of:

Code Section	Offense Description
18 U.S.C. § 924(c)	Use and Carry of a firearm during and in relation to a drug trafficking crime.
21 U.S.C. § § 841(a)(1), 846	Conspiracy to distribute heroin, a Schedule I controlled substance.

The application is based on these facts:
See attached affidavit.

- ☒ Continued on the attached sheet.
- ☐ Delayed notice of days (give exact ending date if more than 30 days:) is requested under 18 U.S.C. § 3103a, the basis of which is set forth on the attached sheet.

Reviewed by AUSA/SAUSA:

AUSA Carina A. Cuellar

Applicant's signature

Michael A. Fernald, ATF Special Agent

Printed name and title

Sworn to before me and signed in my presence.

Date: 07/05/2017

Judge's signature

City and state: Alexandria, VA

Hon. Theresa Carroll Buchanan, US Magistrate Judge

Printed name and title

ATTACHMENT A

Place to be searched

The property to be searched is a beige Chevrolet Malibu bearing Virginia License Plate number XXX – 3020 (the SUBJECT VEHICLE).

ATTACHMENT B

Items to be Seized

The items to be seized are fruits, evidence, records and information relating to, contraband, or instrumentalities of violations of Title 21, United States Code, Sections 841(a)(1) and 846(a) (distribution and possession with intent to heroin and other controlled substances, and conspiracy to distribute heroin and other controlled substances) and Title 18, United States Code, Section 924(c) (use and carry of a firearm during and relation to a drug trafficking crime), including, but not limited to:

- a. Controlled substances, packaging materials, indicia of distribution, records and documents, receipts, notes ledgers and other papers including any computerized or electronic records including cellular telephones, relating to the ordering, purchase or possession of controlled substances;
- b. U.S. currency and other illicit gains from the distribution of firearms and/or controlled substances;
- c. Books, records, receipts, notes, ledgers, and other papers including any computerized or electronic records including cellular telephones, relating to the ordering, purchase or possession of firearms;
- d. Address and/or telephone books and papers, including computerized or electronic address and/or telephone records reflecting names, addresses and/or telephone numbers;
- e. Books, records, receipts, bank statements, and records, money drafts, and any other items evidencing the obtaining, secreting, transfer, concealment, storage and/or

expenditure of money or other assets including, but not limited to, firearms and/or controlled substances;

- f. Photographs, in particular, photographs of firearms and/or controlled substances and photographs of individuals possessing firearms and/or controlled substances and photographs showing the association of individuals;
- g. Firearms, including, but not limited to, firearms parts, accessories, holsters, and ammunition;
- h. Cellular phones, computers, and other electronic storage media or digital devices;
- i. For any electronics searched, any conversations, whether through text messages or other applications, where PATTERSON discusses the purchase and sale of heroin and other controlled substances;
- j. For any electronics searched, any conversations, whether through text messages or other applications, where PATTERSON discusses the purchase and use of firearms; and
- k. For any electronics searched, any photographs of controlled substances, firearms, ammunition, firearms receipts, and documentation related to the purchase of firearms.

For any computer or storage medium whose seizure is otherwise authorized by this warrant, and any computer or storage medium that contains or in which is stored records or information that is otherwise called for by this warrant (hereinafter, "COMPUTER"):

- a. evidence of who used, owned, or controlled the COMPUTER at the time the things described in this warrant were created, edited, or deleted, such as logs, registry entries, configuration files, saved usernames and passwords, documents, browsing history, user

profiles, email, email contacts, “chat,” instant messaging logs, photographs, and correspondence;

- b. evidence of software that would allow others to control the COMPUTER, such as viruses, Trojan horses, and other forms of malicious software, as well as evidence of the presence or absence of security software designed to detect malicious software;
- c. evidence of the lack of such malicious software;
- d. evidence indicating how and when the computer was accessed or used to determine the chronological context of computer access, use, and events relating to crime under investigation and to the computer user;
- e. evidence indicating the computer user’s state of mind as it relates to the crime under investigation;
- f. evidence of the attachment to the COMPUTER of other storage devices or similar containers for electronic evidence;
- g. evidence of counter-forensic programs (and associated data) that are designed to eliminate data from the COMPUTER;
- h. evidence of the times the COMPUTER was used;
- i. passwords, encryption keys, and other access devices that may be necessary to access the COMPUTER;
- j. documentation and manuals that may be necessary to access the COMPUTER or to conduct a forensic examination of the COMPUTER;
- k. records of or information about Internet Protocol addresses used by the COMPUTER;
- l. records of or information about the COMPUTER’s Internet activity, including firewall logs, caches, browser history and cookies, “bookmarked” or “favorite” web pages,

search terms that the user entered into any Internet search engine, and records of user-typed web addresses; and

m. contextual information necessary to understand the evidence described in this attachment.

As used above, the terms “records” and “information” includes all forms of creation or storage, including any form of computer or electronic storage (such as hard disks or other media that can store data); any handmade form (such as writing); any mechanical form (such as printing or typing); and any photographic form (such as microfilm, microfiche, prints, slides, negatives, videotapes, motion pictures, or photocopies).

The term “computer” includes all types of electronic, magnetic, optical, electrochemical, or other high speed data processing devices performing logical, arithmetic, or storage functions, including desktop computers, notebook computers, mobile phones, including “smart” phones, tablets, server computers, and network hardware.

The term “storage medium” includes any physical object upon which computer data can be recorded. Examples include hard disks, RAM, floppy disks, flash memory, CD-ROMs, and other magnetic or optical media.

IN THE UNITED STATES DISTRICT COURT FOR THE

EASTERN DISTRICT OF VIRGINIA

Alexandria Division

JUL - 5 2017

IN THE MATTER OF THE SEARCH OF A:

BEIGE CHEVROLET MALIBU BEARING
VIRGINIA LICENSE PLATE NUMBER
XXX-3020

Case No. 1:17-sw-393

**AFFIDAVIT IN SUPPORT OF AN
APPLICATION UNDER RULE 41 FOR A
WARRANT TO SEARCH AND SEIZE**

I, Michael A. Fernald, being first duly sworn, hereby depose and state as follows:

INTRODUCTION AND AGENT BACKGROUND

1. I make this affidavit in support of an application under Rule 41 of the Federal Rules of Criminal Procedure for a warrant to search a beige Chevrolet Malibu bearing Virginia license plate number XXX-3020, hereinafter the "SUBJECT VEHICLE," further described in Attachment A, for the things described in Attachment B. More specifically, if the SUBJECT VEHICLE is driven prior to the controlled buy scheduled at 5:00 p.m. on July 5, 2017, this affidavit seeks a search warrant to stop the SUBJECT VEHICLE and search it for the items described in Attachment B. As further explained herein, CORY ALEXANDER PATTERSON has conspired to distribute controlled substances and used and carried a firearm during and in relation to a drug trafficking crime, within the Eastern District of Virginia and elsewhere. Further, PATTERSON uses the SUBJECT VEHICLE to store controlled substances and firearms.

2. I have been a Special Agent with the Bureau of Alcohol, Tobacco, Firearms and Explosives ("ATF") since 2014. Prior to my appointment with the ATF, I was a sworn law

enforcement officer with the Commonwealth of Virginia for over eleven years. I am currently assigned to the ATF Falls Church Group II Field Office. In my capacity as a law enforcement officer, I have investigated individuals for the illegal possession and use of firearms, illegal possession and distribution of controlled substances, and for committing violent crimes. Many of these investigations involved the execution of search warrants, and led to the arrest and conviction of individuals for violations of state and federal firearms and drug trafficking laws.

3. During my time as a law enforcement officer, I have become knowledgeable of the methods and modes of narcotics operations, and the language and patterns of drug abuse and trafficking. During the course of my participation in investigations of narcotics trafficking organizations, I have testified in trial, Grand Jury proceedings, and at probable cause and detention hearings. I have gained knowledge in the use of various investigative techniques including the use of wiretaps, physical surveillance, undercover agents, confidential informants and cooperating witnesses, the controlled purchases of illegal narcotics, electronic surveillance, consensually monitored recordings, investigative interviews, financial investigations, the service of Grand Jury Subpoenas, and the execution of search and arrest warrants.

4. Based on my training and experience, I know that individuals involved in criminal activities will often communicate with their associates before, during, or after the crime by using cellular telephones and that communication can be made through either verbal conversation, third party communication applications, or through the use of text messages between the two communicating party's cellular telephones or other devices. It is also commonly understood and known that many people in our society communicate with their cellular telephones and other devices in both manners.

5. Based on my training and experience, I also know that information gained

through the obtaining of data stored in the part of the cellular telephone and other devices routinely referred to as an address book or contacts file in an individual's cellular telephone and other devices, as well as the recovery of text messages sent or received from that cellular telephone and other devices can lead to identifying accomplices, or witnesses to the crimes committed by the individual. Based on my training experience, I also know that know that individuals frequently maintain personal records and documents in an electronic format on laptop computers and/or smart phones.

6. Further, based on my training and experience in executing court-authorized search warrants, I also know that drug traffickers commonly use their vehicles to transport controlled substances. These drugs may be concealed in locations known to the traffickers to avoid law enforcement detection. Drug traffickers also commonly maintain in their vehicles and on their property paraphernalia for packaging, processing, diluting, weighing and distributing controlled substances.

7. The facts and information contained in this affidavit are based upon my personal knowledge of the investigation and observations of other law enforcement officers involved in this investigation. All observations not personally made by me were relayed to me by the individuals who made them or are based on my review of reports, documents, and other physical evidence obtained during the course of this investigation.

8. This affidavit is intended to show only that there is sufficient probable cause for the requested warrant and does not set forth all of my knowledge about this matter.

PROBABLE CAUSE

A. Background on Investigation into Cory Patterson

9. Since in and around April 2017, law enforcement has been investigating narcotics

and firearms trafficking within the Eastern District of Virginia and elsewhere. A confidential informant ("CI-1") informed a Prince William County Police Department ("PWCPD") detective that PATTERSON was distributing heroin in the area. Based on PATTERSON's membership in the Bloods gang, ATF also joined the investigation.

B. Controlled Purchase of Heroin from Cory Patterson on April 18, 2017

10. On or about April 18, 2017, CI-1, acting under law enforcement supervision, contacted PATTERSON on his telephone and ordered a quantity of heroin. A PWCPD detective operating in undercover capacity ("UC-1") was assigned to drive CI-1 to the transaction. Prior to the controlled purchase, CI-1, UC-1, and UC-1's vehicle were searched and found to be clear of any illegal contraband.

11. UC-1 then drove to a location in Dumfries, Virginia, which is located within the Eastern District of Virginia. CI-1 received a call from PATTERSON, who advised CI-1 that he was in a beige Chevrolet Malibu (the SUBJECT VEHICLE). When UC-1 parked, PATTERSON exited the SUBJECT VEHICLE and entered the backseat of UC-1's vehicle. UC-1 provided PATTERSON with \$350 in documented funds and received a bag containing approximately 3.5 grams of heroin in return. After the transaction, law enforcement obtained the temporary Virginia vehicle registration for the SUBJECT VEHICLE, which returned to another person.

C. Controlled Purchase of Heroin and a Firearm from Cory Patterson on April 25, 2017

12. On or about April 25, 2017, UC-1 contacted PATTERSON and ordered a quantity of heroin and a firearm. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. UC-1 then drove to a location in Dumfries to

meet PATTERSON. PATTERSON called UC-1 and informed UC-1 that he was in his vehicle, which was parked in the lot. When UC-1 parked, PATTERSON exited the SUBJECT VEHICLE and entered the passenger seat of UC-1's vehicle. PATTERSON provided UC-1 with a plastic bag containing approximately seven (7) grams of heroin. PATTERSON then pulled out a Ruger model LCP .380-caliber pistol from his jacket pocket and a box of Remington .380 ammunition and handed both items to UC-1. UC-1 provided PATTERSON with \$1,200 (\$700 for heroin, \$500 for firearm) in documented funds in return. PATTERSON reported the firearm was stolen and informed UC-1 that he would be able to obtain additional firearms in the future. Law enforcement later determined the firearm was stolen from Spotsylvania County, Virginia.

13. Based upon my training and experience, I know that the Ruger .380 caliber pistol is a firearm as that term is defined under Title 18, United States Code, Section 921(a)(3).

D. Controlled Purchase of Heroin from Cory Patterson on May 4, 2017

14. On or about May 4, 2017, UC-1 contacted PATTERSON and ordered a quantity of heroin and a firearm. PATTERSON reported he did not have a firearm to sell, but that he would obtain a firearm soon. PATTERSON further reported he only had 17 grams of heroin left and UC-1 asked him to hold onto some. PATTERSON agreed to hold ten (10) grams for UC-1. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. UC-1 then drove to a location in Dumfries. PATTERSON advised he was approximately 15 minutes from the meeting location and a short time later was observed exiting Interstate 95 onto Dumfries Road in the SUBJECT VEHICLE. After PATTERSON parked, he exited the SUBJECT VEHICLE and entered UC-1's vehicle. UC-1 provided PATTERSON with \$1,000 in documented funds and PATTERSON provided UC-1 with a plastic bag containing approximately ten (10) grams of heroin in return.

E. Controlled Purchase of Heroin from Cory Patterson on May 9, 2017

15. On May 9, 2017, UC-1 contacted PATTERSON and ordered a quantity of heroin. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. UC-1 drove to a location in Dumfries. Law enforcement observed PATTERSON parked at the meeting location in the SUBJECT VEHICLE. The SUBJECT VEHICLE now had a Virginia registration, which returned to the same individual (not PATTERSON) as the previous temporary registration. UC-1 parked next to the SUBJECT VEHICLE. PATTERSON then exited the SUBJECT VEHICLE and entered UC-1's vehicle. UC-1 provided PATTERSON with \$2,800 in documented funds and PATTERSON provided UC-1 with a plastic bag containing approximately 29 grams of heroin in return. After the transaction, law enforcement followed PATTERSON, who drove the SUBJECT VEHICLE to his known residence where he parked the SUBJECT VEHICLE.

F. Controlled Purchase of Heroin from Cory Patterson on May 17, 2017

16. On May 15, 2017, UC-1 contacted PATTERSON and ordered a quantity of heroin. UC-1 and PATTERSON agreed to meet on May 17, 2017. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. Before meeting, PATTERSON contacted UC-1 and informed him that his vehicle had broken down and that it needed to go to the shop. Law enforcement surveillance located the SUBJECT VEHICLE at a shop on McWhirt Loop, Fredericksburg, Virginia. Law enforcement then followed PATTERSON, who was driving the SUBJECT VEHICLE to the Geico Regional Office. At the Geico Office, law enforcement observed PATTERSON pickup the suspected owner of the SUBJECT VEHICLE. Surveillance continued to follow PATTERSON, who drove the suspected owner and himself to his known residence. Shortly thereafter, PATTERSON and

the suspected owner exited the residence and entered the SUBJECT VEHICLE. PATTERSON then drove the suspected owner of the SUBJECT VEHICLE to a location and was then followed as he drove north on Interstate 95.

17. PATTERSON contacted UC-1 and informed him he was on the way. Surveillance continued to follow PATTERSON to the meeting location in Dumfries, where PATTERSON parked the SUBJECT VEHICLE next to UC-1's vehicle. PATTERSON then exited the SUBJECT VEHICLE and entered UC-1's vehicle. UC-1 provided PATTERSON with \$5,600 in documented funds and PATTERSON provided UC-1 with a plastic bag containing approximately 56 grams of heroin in return.

G. Controlled Purchase of Heroin from Cory Patterson on June 1, 2017

18. On or about May 30, 2017, UC-1 contacted PATTERSON and ordered a quantity of heroin. PATTERSON agreed to meet UC-1 on June 1, 2017. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. UC-1 was instructed to order a second ounce of heroin during the transaction in an attempt to identify PATTERSON's source of heroin.

19. Prior to the meeting, PATTERSON was observed driving the SUBJECT VEHICLE to the meeting location in Dumfries. PATTERSON exited the SUBJECT VEHICLE and entered UC-1's vehicle. UC-1 provided PATTERSON with \$2,800 in documented funds and PATTERSON provided UC-1 with a plastic bag containing approximately 29 grams of heroin in return. UC-1 then asked PATTERSON if he could purchase another ounce of heroin. PATTERSON informed UC-1 that he would need to return to his house to retrieve the heroin. UC-1 informed PATTERSON that it would take too long and agreed to meet up with PATTERSON later.

H. Controlled Purchase of Heroin and Firearms from Cory Patterson on June 14, 2017

20. On June 13, 2017, PATTERSON contacted UC-1 and informed UC-1 that he had “two 9’s for a stack” (two 9mm firearms for \$1,000). UC-1 told PATTERSON he wanted the firearms and asked if he could get an ounce of heroin at the same time. PATTERSON said he could make that happen. UC-1 had been paying PATTERSON \$100 per gram; however, UC-1 asked PATTERSON if he could lower his price because UC-1 was purchasing two firearms as well. In response, PATTERSON agreed to \$2,500 for the ounce instead of \$2800. PATTERSON and UC-1 agreed to meet on June 14, 2017. Prior to the controlled purchase, UC-1 and the vehicle were searched and found to be clear of any illegal contraband. Law enforcement surveillance observed PATTERSON and the SUBJECT VEHICLE at his suspected residence. PATTERSON left the residence approximately ten minutes before calling UC-1 to tell UC-1 that he was on his way to the deal.

21. PATTERSON was observed driving the SUBJECT VEHICLE to the meeting location in Dumfries. After parking, PATTERSON exited the SUBJECT VEHICLE and entered UC-1’s vehicle. PATTERSON reported he had the straps (firearms) on him, but left the work (heroin) in his vehicle. PATTERSON provided UC-1 with two Smith & Wesson 9mm pistols, a magazine, and ammunition for each firearm. PATTERSON then exited UC-1’s vehicle and retrieved a plastic bag containing approximately 29 grams of heroin. In return, UC-1 provided PATTERSON with \$3,500 in documented funds.

22. Based upon my training and experience, I know the two Smith & Wesson 9mm pistols to be firearms as that term is defined under Title 18, United States Code, Section 921(a)(3).

I. Purchase of Heroin from Cory Patterson on July 5, 2017

23. UC-1 contacted PATTERSON and PATTERSON has agreed to sell UC-1 a quantity of heroin on July 5, 2017 at 5:00 p.m. Based on previous surveillance, law enforcement believe that PATTERSON will likely pickup his girlfriend from work around 4:00 p.m. and then either drive his girlfriend to their shared residence or drive with his girlfriend to the deal. The girlfriend in the past was present for one of the controlled buys. For officer safety reasons, law enforcement seek permission to stop and search the vehicle before it returns to the residence or the meeting location for the controlled buy.

24. I submit the above facts establish that PATTERSON stores heroin and other contraband in the SUBJECT VEHICLE. I therefore submit that this affidavit supports probable cause for a warrant to search the SUBJECT VEHICLE described in Attachment A and to seize the items described in Attachment B.

25. I further submit the below technical terms and information because I know based on my training and experience, that people commonly transport their cellular phones and other electronics in their vehicles.

TECHNICAL TERMS

26. Based on my training and experience, I use the following technical terms to convey the following meanings:

- a. *IP Address*: The Internet Protocol address (or simply "IP address") is a unique numeric address used by computers on the Internet. An IP address looks like a series of four numbers, each in the range 0-255, separated by periods (e.g., 121.56.97.178). Every computer attached to the Internet must be assigned an IP address so that Internet traffic sent from and directed to that

computer may be directed properly from its source to its destination. Most Internet service providers control a range of IP addresses. Some computers have static—that is, long-term—IP addresses, while other computers have dynamic—that is, frequently changed—IP addresses.

- b. *Internet*: The Internet is a global network of computers and other electronic devices that communicate with each other. Due to the structure of the Internet, connections between devices on the Internet often cross state and international borders, even when the devices communicating with each other are in the same state.
- c. *Storage medium*: A storage medium is any physical object upon which computer data can be recorded. Examples include hard disks, RAM, floppy disks, flash memory, CD-ROMs, and other magnetic or optical media.

COMPUTERS, ELECTRONIC STORAGE, AND FORENSIC ANALYSIS

27. As described above and in Attachment B, this application seeks permission to search for records that might be found in the SUBJECT VEHICLE, in whatever form they are found. One form in which the records might be found is data stored on a computer's hard drive or other storage media. Thus, the warrant applied for would authorize the seizure of electronic storage media or, potentially, the copying of electronically stored information, all under Rule 41(e)(2)(B).

28. *Probable cause*. I submit that if a computer or storage medium is found in the SUBJECT VEHICLE, there is probable cause to believe those records will be stored on that computer or storage medium, for at least the following reasons:

- a. Based on my knowledge, training, and experience, I know that computer files or remnants of such files can be recovered months or even years after they have been downloaded onto a storage medium, deleted, or viewed via the Internet.

Electronic files downloaded to a storage medium can be stored for years at little or no cost. Even when files have been deleted, they can be recovered months or years later using forensic tools. This is so because when a person “deletes” a file on a computer, the data contained in the file does not actually disappear; rather, that data remains on the storage medium until it is overwritten by new data.

- b. Therefore, deleted files, or remnants of deleted files, may reside in free space or slack space—that is, in space on the storage medium that is not currently being used by an active file—for long periods of time before they are overwritten. In addition, a computer’s operating system may also keep a record of deleted data in a “swap” or “recovery” file.

- c. Wholly apart from user-generated files, computer storage media—in particular, computers’ internal hard drives—contain electronic evidence of how a computer has been used, what it has been used for, and who has used it. To give a few examples, this forensic evidence can take the form of operating system configurations, artifacts from operating system or application operation, file system data structures, and virtual memory “swap” or paging files. Computer users typically do not erase or delete this evidence, because special software is typically required for that task. However, it is technically possible to delete this information.

- d. Similarly, files that have been viewed via the Internet are sometimes automatically downloaded into a temporary Internet directory or “cache.”

29. *Forensic evidence.* As further described in Attachment B, this application seeks permission to locate not only computer files that might serve as direct evidence of the crimes described on the warrant, but also for forensic electronic evidence that establishes how computers were used, the purpose of their use, who used them, and when. There is probable cause to believe that this forensic electronic evidence will be on any storage medium in the SUBJECT VEHICLE because:

- a. Data on the storage medium can provide evidence of a file that was once on the storage medium but has since been deleted or edited, or of a deleted portion of a file (such as a paragraph that has been deleted from a word processing file). Virtual memory paging systems can leave traces of information on the storage medium that show what tasks and processes were recently active. Web browsers, e-mail programs, and chat programs store configuration information on the storage medium that can reveal information such as online nicknames and passwords. Operating systems can record additional information, such as the attachment of peripherals, the attachment of USB flash storage devices or other external storage media, and the times the computer was in use. Computer file systems can record information about the dates files were created and the sequence in which they were created, although this information can later be falsified.
- b. As explained herein, information stored within a computer and other electronic storage media may provide crucial evidence of the “who, what, why, when,

where, and how” of the criminal conduct under investigation, thus enabling the United States to establish and prove each element or alternatively, to exclude the innocent from further suspicion. In my training and experience, information stored within a computer or storage media (e.g., registry information, communications, images and movies, transactional information, records of session times and durations, internet history, and anti-virus, spyware, and malware detection programs) can indicate who has used or controlled the computer or storage media. This “user attribution” evidence is analogous to the search for “indicia of occupancy” while executing a search warrant at a residence. The existence or absence of anti-virus, spyware, and malware detection programs may indicate whether the computer was remotely accessed, thus inculcating or exculpating the computer owner. Further, computer and storage media activity can indicate how and when the computer or storage media was accessed or used. For example, as described herein, computers typically contain information that log: computer user account session times and durations, computer activity associated with user accounts, electronic storage media that connected with the computer, and the IP addresses through which the computer accessed networks and the internet. Such information allows investigators to understand the chronological context of computer or electronic storage media access, use, and events relating to the crime under investigation. Additionally, some information stored within a computer or electronic storage media may provide crucial evidence relating to the physical location of other evidence and the suspect. For example, images stored on a computer may both show a particular location and

have geolocation information incorporated into its file data. Such file data typically also contains information indicating when the file or image was created. The existence of such image files, along with external device connection logs, may also indicate the presence of additional electronic storage media (e.g., a digital camera or cellular phone with an incorporated camera). The geographic and timeline information described herein may either inculcate or exculpate the computer user. Last, information stored within a computer may provide relevant insight into the computer user's state of mind as it relates to the offense under investigation. For example, information within the computer may indicate the owner's motive and intent to commit a crime (e.g., internet searches indicating criminal planning), or consciousness of guilt (e.g., running a "wiping" program to destroy evidence on the computer or password protecting/encrypting such evidence in an effort to conceal it from law enforcement).

- c. A person with appropriate familiarity with how a computer works can, after examining this forensic evidence in its proper context, draw conclusions about how computers were used, the purpose of their use, who used them, and when.
- d. The process of identifying the exact files, blocks, registry entries, logs, or other forms of forensic evidence on a storage medium that are necessary to draw an accurate conclusion is a dynamic process. While it is possible to specify in advance the records to be sought, computer evidence is not always data that can be merely reviewed by a review team and passed along to investigators. Whether data stored on a computer is evidence may depend on other information stored on the computer and the application of knowledge about how a computer behaves.

Therefore, contextual information necessary to understand other evidence also falls within the scope of the warrant.

- e. Further, in finding evidence of how a computer was used, the purpose of its use, who used it, and when, sometimes it is necessary to establish that a particular thing is not present on a storage medium. For example, the presence or absence of counter-forensic programs or anti-virus programs (and associated data) may be relevant to establishing the user's intent.

30. *Necessity of seizing or copying entire computers or storage media.* In most cases, a thorough search of a premises for information that might be stored on storage media often requires the seizure of the physical storage media and later off-site review consistent with the warrant. In lieu of removing storage media from the premises, it is sometimes possible to make an image copy of storage media. Generally speaking, imaging is the taking of a complete electronic picture of the computer's data, including all hidden sectors and deleted files. Either seizure or imaging is often necessary to ensure the accuracy and completeness of data recorded on the storage media, and to prevent the loss of the data either from accidental or intentional destruction. This is true because of the following:

- a. The time required for an examination. As noted above, not all evidence takes the form of documents and files that can be easily viewed on site. Analyzing evidence of how a computer has been used, what it has been used for, and who has used it requires considerable time, and taking that much time on premises could be unreasonable. As explained above, because the warrant calls for forensic electronic evidence, it is exceedingly likely that it will be necessary to thoroughly examine storage media to obtain evidence. Storage media can store a large

volume of information. Reviewing that information for things described in the warrant can take weeks or months, depending on the volume of data stored, and would be impractical and invasive to attempt on-site.

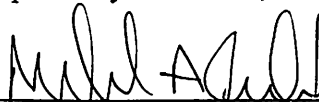
- b. Technical requirements. Computers can be configured in several different ways, featuring a variety of different operating systems, application software, and configurations. Therefore, searching them sometimes requires tools or knowledge that might not be present on the search site. The vast array of computer hardware and software available makes it difficult to know before a search what tools or knowledge will be required to analyze the system and its data in the Subject Vehicle. However, taking the storage media off-site and reviewing it in a controlled environment will allow its examination with the proper tools and knowledge.
- c. Variety of forms of electronic media. Records sought under this warrant could be stored in a variety of storage media formats that may require off-site reviewing with specialized forensic tools.

31. *Nature of examination.* Based on the foregoing, and consistent with Rule 41(e)(2)(B), the warrant I am applying for would permit seizing, imaging, or otherwise copying storage media that reasonably appear to contain some or all of the evidence described in the warrant, and would authorize a later review of the media or information consistent with the warrant. The later review may require techniques, including but not limited to computer-assisted scans of the entire medium, that might expose many parts of a hard drive to human inspection in order to determine whether it is evidence described by the warrant.

CONCLUSION


32. Based on the foregoing facts, there is probable cause to believe that CORY ALEXANDER PATTERSON is involved in the following federal offense: (i) conspiracy to distribute and to possess with intent to distribute heroin, in violation of Title 21, United States Code, Sections 841(a)(1) and 846 and (ii) use and carry of a firearm during and in relation to a drug trafficking crime, in violation of Title 18, United States Code, Section 924(c). In addition, there is probable cause to believe that items and records that are evidence of these violations will be contained in the Chevrolet Malibu bearing Virginia License Plate number XXX – 3020, should PATTERSON be driving the vehicle in the afternoon of July 5, 2017. I submit that this affidavit therefore supports probable cause for a warrant to search the SUBJECT VEHICLE described in Attachment A and seize the items described in Attachment B.

Respectfully submitted,



Michael A. Fernald
Special Agent
Bureau of Alcohol, Tobacco, Firearms and
Explosives

Subscribed and sworn to before me on July 5, 2017. /s/



Theresa Carroll Buchanan
United States Magistrate Judge

The Honorable Theresa Carroll Buchanan
United States Magistrate Judge

ATTACHMENT A

Place to be searched

The property to be searched is a beige Chevrolet Malibu bearing Virginia License Plate number XXX – 3020 (the SUBJECT VEHICLE).

ATTACHMENT B

Items to be Seized

The items to be seized are fruits, evidence, records and information relating to, contraband, or instrumentalities of violations of Title 21, United States Code, Sections 841(a)(1) and 846(a) (distribution and possession with intent to heroin and other controlled substances, and conspiracy to distribute heroin and other controlled substances) and Title 18, United States Code, Section 924(c) (use and carry of a firearm during and relation to a drug trafficking crime), including, but not limited to:

- a. Controlled substances, packaging materials, indicia of distribution, records and documents, receipts, notes ledgers and other papers including any computerized or electronic records including cellular telephones, relating to the ordering, purchase or possession of controlled substances;
- b. U.S. currency and other illicit gains from the distribution of firearms and/or controlled substances;
- c. Books, records, receipts, notes, ledgers, and other papers including any computerized or electronic records including cellular telephones, relating to the ordering, purchase or possession of firearms;
- d. Address and/or telephone books and papers, including computerized or electronic address and/or telephone records reflecting names, addresses and/or telephone numbers;
- e. Books, records, receipts, bank statements, and records, money drafts, and any other items evidencing the obtaining, secreting, transfer, concealment, storage and/or

expenditure of money or other assets including, but not limited to, firearms and/or controlled substances;

- f. Photographs, in particular, photographs of firearms and/or controlled substances and photographs of individuals possessing firearms and/or controlled substances and photographs showing the association of individuals;
- g. Firearms, including, but not limited to, firearms parts, accessories, holsters, and ammunition;
- h. Cellular phones, computers, and other electronic storage media or digital devices;
- i. For any electronics searched, any conversations, whether through text messages or other applications, where PATTERSON discusses the purchase and sale of heroin and other controlled substances;
- j. For any electronics searched, any conversations, whether through text messages or other applications, where PATTERSON discusses the purchase and use of firearms; and
- k. For any electronics searched, any photographs of controlled substances, firearms, ammunition, firearms receipts, and documentation related to the purchase of firearms.

For any computer or storage medium whose seizure is otherwise authorized by this warrant, and any computer or storage medium that contains or in which is stored records or information that is otherwise called for by this warrant (hereinafter, "COMPUTER"):

- a. evidence of who used, owned, or controlled the COMPUTER at the time the things described in this warrant were created, edited, or deleted, such as logs, registry entries, configuration files, saved usernames and passwords, documents, browsing

history, user profiles, email, email contacts, "chat," instant messaging logs, photographs, and correspondence;

- b. evidence of software that would allow others to control the COMPUTER, such as viruses, Trojan horses, and other forms of malicious software, as well as evidence of the presence or absence of security software designed to detect malicious software;
- c. evidence of the lack of such malicious software;
- d. evidence indicating how and when the computer was accessed or used to determine the chronological context of computer access, use, and events relating to crime under investigation and to the computer user;
- e. evidence indicating the computer user's state of mind as it relates to the crime under investigation;
- f. evidence of the attachment to the COMPUTER of other storage devices or similar containers for electronic evidence;
- g. evidence of counter-forensic programs (and associated data) that are designed to eliminate data from the COMPUTER;
- h. evidence of the times the COMPUTER was used;
- i. passwords, encryption keys, and other access devices that may be necessary to access the COMPUTER;
- j. documentation and manuals that may be necessary to access the COMPUTER or to conduct a forensic examination of the COMPUTER;
- k. records of or information about Internet Protocol addresses used by the COMPUTER;
- l. records of or information about the COMPUTER's Internet activity, including firewall logs, caches, browser history and cookies, "bookmarked" or "favorite" web

pages, search terms that the user entered into any Internet search engine, and records of user-typed web addresses; and

m. contextual information necessary to understand the evidence described in this attachment.

As used above, the terms “records” and “information” includes all forms of creation or storage, including any form of computer or electronic storage (such as hard disks or other media that can store data); any handmade form (such as writing); any mechanical form (such as printing or typing); and any photographic form (such as microfilm, microfiche, prints, slides, negatives, videotapes, motion pictures, or photocopies).

The term “computer” includes all types of electronic, magnetic, optical, electrochemical, or other high speed data processing devices performing logical, arithmetic, or storage functions, including desktop computers, notebook computers, mobile phones, including “smart” phones, tablets, server computers, and network hardware.

The term “storage medium” includes any physical object upon which computer data can be recorded. Examples include hard disks, RAM, floppy disks, flash memory, CD-ROMs, and other magnetic or optical media.